

A NEW SPECIES OF *GLADIOLUS* AND SOME NOMENCLATURAL CHANGES IN THE IRIDACEAE

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ABSTRACT

A new species *Gladiolus lapeirousioides* is described. This is followed by a short discussion of the rules of nomenclature dealing with superfluous names. Five species of Cape Iridaceae are dealt with in this connection. The names of *Ixia crispata*, *Hexaglottis flexuosa* and *Aristea caerulea* (*coerulea*) are illegitimate and the new names *Ixia erubescens*, *Hexaglottis lewisiae* and *Aristea monticola* are proposed.

UITTREKSEL

'N NUWE SOORT *GLADIOLUS* EN 'N PAAR NAAMVERANDERINGES IN DIE IRIDACEAE.

'n Nuwe soort *Gladiolus* word beskryf. Dit word gevolg deur 'n kort bespreking oor die nomenklatuur reëls wat met oorbodige name handel. Vyf soorte Kaapse Iridaceae word in hierdie verband behandel.

1. A NEW SPECIES OF *GLADIOLUS*

Gladiolus lapeirousioides Goldbl. sp. nov. Holotype: *Goldblatt* 540 (BOL); isotypes NBG, PRE.

Species proprie, foliis falcatis tribus, inflorescentia inflexa et perianthii tubo gracile longo distinguitur.

Planta parva, ad 15 cm alta. Caudex cormus conicus, ad 2 cm longus, bulbiliferus, tunicis exterioris longitudinaliter fissuris. Folium vaginans unum, membranaceum. Folia basalia 3—4, falcata, ad 15 cm longa et 0,4 cm lata. Scapus simplex vel pauciramosus, ad basem inflorescentiae inflexus. Inflorescentia spica secunda, ad 8—10 flores composita. Bracteae duae, herbaceae, 1—15 cm longae, exterior longior interior inclusa. Flores zygomorphes, cremei ad subrosei et rubri punctati; perianthii tubus 3—4 cm longus, gracilis; perianthii segmenta ovata ad lanceolata, inaequalia, superior magnum lateralia reflexa, inferiora tria minora, et quoque rubro notata prope basem. Stamina erecta, antherae unilaterales contiguae. Stylus filiformis, ramosus ad apicem antherarum, rami ad apices expansi et bilobi. Capsula ovoidea, 1 cm longa, pauca semina alata continens.

Plants fairly small, reaching to 15 cm above the ground. Corm conical, up to 2 cm long, tapering at the apex, base rounded, inner tunics entire and light yellow, outer tunics light brown, and split from the base into a number of strips,

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bearing cormlets round the base and on the ends of short runners. Sheathing leaf only one, membranous, reaching to ground level. Basal leaves three, distichously arranged, equitant, 2.5–4 mm wide, up to 15 cm long, falcate, midrib prominent. Scape simple or bearing one or two branches; terete, inflexed below the inflorescence. Cauline leaves subtending each branch, or if scape simple, then inserted shortly above the ground. Inflorescence a second spike, held more or less parallel to the ground, bearing up to 10 flowers. Bracts two, inner slightly shorter and enclosed in the outer, herbaceous, 1–1.5 cm long, acute. Flower zygomorphic, cream coloured; perianth tube 3–4 cm long, slender, but widening very gradually towards the apex; perianth segments unequal, narrowly ovate to lanceolate, upper segment largest, erect, upper lateral segments reflexed, lower three segments smallest, forming a lip, each marked near the base with a red spot. Stamens erect, inserted at the apex of the perianth tube, cream coloured, anthers unilateral and contiguous. Ovary ovoid, about 0.3 cm long, style filiform, three-branched, branching at the level of the anthers, stigma at the end of each branch, expanded and bilobed. Capsule ovoid, about 1 cm long, each loculus containing only a few seeds; seeds light brown, winged.

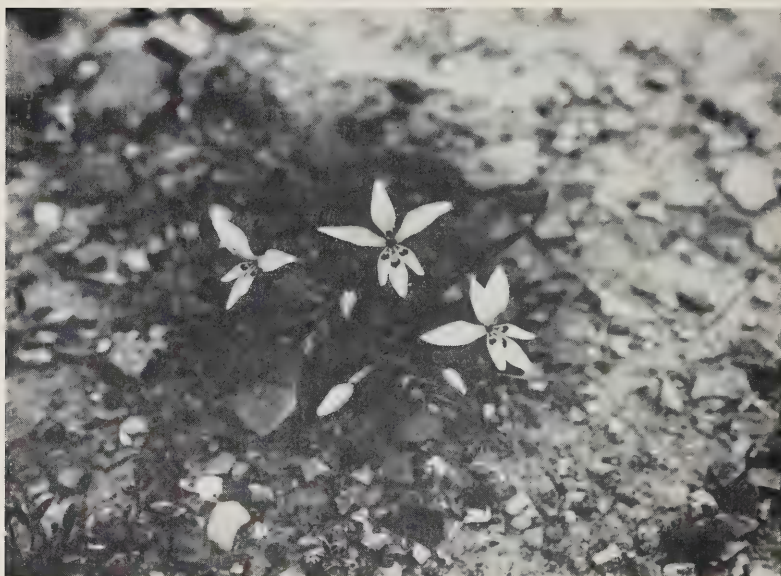


FIG. 1.

Gladiolus lapeirousioides in flower at the type locality, south-east of Loeriesfontein, Cape Province.

Flowering time: September.

Habitat: In decomposed shale at the base of hills in the area south of Loeriesfontein.

Material examined:

CAPE—30 19 (Loeriesfontein): south of Loeriesfontein, about 1 mile along turnoff to Kliprand from the Loeriesfontein-Nieuwoudtville road (-CD), *Goldblatt* 540 (BOL, NBG, PRE).

The inflexed inflorescence and the flower with its long narrow perianth tube and extended segments distinguish this species from all other representatives of the genus. The small capsule containing comparatively few winged seeds is also very characteristic.

This very unusual and very distinct species was discovered in full bloom in the spring of 1970 in the dry, arid area south of Loeriesfontein. Superficially it is very similar to *Lapeirousia fabricii*, a plant that the author was actually searching for when this *Gladiolus* was discovered. From a distance the two look very similar, having flowers of the same colour and structure. Closer examination revealed that it was actually a *Gladiolus* as it has a round based corm covered by rather papery tunics and, of course, lacks the divided style branches typical of *Lapeirousia*. There was initially some difficulty over deciding the correct genus to which the plant should be assigned. A later visit to the area yielded fruiting material. Although the capsules are rather small and contain rather few seeds for *Gladiolus*, the characteristically winged seeds left no doubt about the correct genus.

When examined in detail, *G. lapeirousioides* proved to be unlike any known species of *Gladiolus* and as far as could be discovered had not previously been collected. This appears to be rather surprising as the locality, between Loeriesfontein and Nieuwoudtville, is close to a well used road. The explanation may lie in the fact that this arid area receives very infrequent rains and the plant may flower very irregularly, in seasons when the rainfall has been sufficient.

2. NOTES ON NOMENCLATURE

Superfluous Names.

Article 63 of the International Code of Botanical Nomenclature (1966) deals with the problem of superfluous names. This has given, and will continue to give South African botanists a great deal of trouble for a considerable time to come. Many of our well-known plants have names that can or must be considered superfluous. The rule states that a name is illegitimate and must be rejected if it was nomenclaturally superfluous when published. According

to the article this means that if the supposed new taxon *as circumscribed by the author*,* included the type of a name or epithet which ought to have been adopted, the new taxon must be rejected.

The inclusion of a type is understood to mean the citation of a type specimen or its illustration, or the citation of the type of a name or the name itself unless the type is at the same time excluded . . . *either explicitly or by implication*.* This last phrase was added to the article at the 1969 Seattle International Botanical Congress and published in *Taxon* (Stafleu 1970). The intention was to make it clear that automatism in rejection of names was not necessary. Indeed, according to Stafleu a name is not automatically superfluous if the type of the cited name could not within reason have been included by the author within the circumscription of his new taxon. Thus, automatic mistypification (article 7 note 4) is avoided and in some cases the so-called superfluous name is acceptable.

Although it is now clear that rigid application of the rule is unnecessary, it does not allow much flexibility when dealing with early authors such as Thunberg or the younger Linnaeus who, on occasion, cited earlier synonyms for their new taxa. While these are obviously cases of misidentification, it is quite clear that with their incomplete knowledge of the flora and their frequent ignorance of the actual type specimen, they were acting in good faith and believed the two to be identical. Descriptions were at that time frequently inadequate and often it is quite impossible to find any inconsistency in the circumscription of either species which would reveal that two instead of one taxon was involved. Thus, it can seldom be argued that the earlier synonym did not fit the circumscription of the new taxon or that the type specimen was excluded even by implication. If such inconsistencies could be found then it would become possible to argue the legitimacy of an otherwise superfluous epithet.

In the present paper five species of Iridaceae are dealt with. In three cases the present author has found it necessary to reject well-known names for quite common Cape plants. The species concerned are *Ixia crispa* L.f., *Aristea caerulea* (Thunb.) Vahl (also spelled *coerulea*) and *Hexaglottis flexuosa* (L.f.) Sweet. *Anapalina caffra* (Ker ex Bak.) Lewis and *Babiana disticha* Ker (= *plicata*) are also dealt with in this connection.

1. *Ixia crispa* L.f.

The plant known as *Ixia crispa* L.f. requires renaming as the younger Linnaeus (1781) cited as a synonym *Ixia undulata* Burm. f. (1766) when he first described the plant. For a long time these two species were believed to be

*Author's italics.

identical, but N. E. Brown (1929) in his study of Burman's herbarium saw that *Ixia undulata* was quite distinct. At that time the two names were regarded as synonyms of *Tritonia undulata* (Burm. f.) Bak. Brown decided that the plant typified by the younger Linnaeus' *I. crispa* should be transferred to *Tritonia*. As it would have been a homonym of *T. crispa* (L.f.) Ker, he named it *Tritonia thunbergii*.

When Dr. G. J. Lewis revised the genus *Ixia* in 1962 she transferred several species of *Tritonia*, belonging to the subgenus *Dichone* to *Ixia*, among them, *T. thunbergii*, which automatically became *Ixia crispa* once more. As the epithet is superfluous and the only available synonym, *T. thunbergii* is occupied in *Ixia*, a new name, *Ixia erubescens* is proposed.

Strictly speaking, *Ixia crispa* L.f. is a nomenclatural synonym of *Ixia undulata* Burm. f., but it is included in the synonymy of *Ixia erubescens* as the description and specimen cited apply to the latter and not to Burman's plant. The type specimen and description of *Ixia erubescens* remain those of the younger Linnaeus, as there is no intention to alter the species as he described it, except to exclude the cited synonym *Ixia undulata*. Other synonyms bearing the specific epithet *crispa* are also included as these were intended to apply to the younger Linnaeus' plant.

***Ixia erubescens* Goldbl. nom. nov.**

Ixia crispa sensu L.f., Suppl.: 91 (1781), as to description and specimen cited but not to synonym; nom. illeg. (nom. superfl.); sensu Lewis in Jl S. Afr. Bot. 28: 166 (1962).

Type: *Thunberg* 313 (LINN, holo).

Agretta crispa (L.f.) Eckl., Top. Verz.: 24 (1827).

Dichone crispa (L.f.) Laws ex Salisb. in J. Hort. Soc. 1: 320 (1812).

Tritonia undulata (Burm. f.) Baker in J. Linn. Soc. (Bot.) 16: 163 (1877).

Tritonixia undulata (Burm. f.) Klatt, Erganz.: 23 (1882).

Tritonia thunbergii N.E.Br. in Kew Bull. 1929: 137 (1929).

2. *Hexaglottis flexuosa* (L.f.) Sweet.

This plant was first described as *Moraea flexuosa* by the younger Linnaeus who cited as a synonym the earlier name *Ixia longifolia* Jacq. The latter plant is very similar to *Moraea flexuosa* and they were often regarded as identical. Two species are, however, involved. When Sweet transferred *M. flexuosa* to *Hexaglottis*, he cited and continued to regard *Hexaglottis longifolia* (based on *Ixia longifolia*) as a synonym. The epithet is thus superfluous in both genera and must be rejected. As there are no legitimate synonyms available, a new

name is proposed. The name *H. lewisiae* was chosen in honour of Dr. G. J. Lewis for her excellent work on the South African Iridaceae.

Moraea flexuosa L.f. is a nomenclatural synonym of *Ixia longifolia* Jacq. (and of *Hexaglottis longifolia* (Jacq.) Vent.), but is included here in the synonymy of *Hexaglottis lewisiae* as the specimen cited by the younger Linnaeus is the latter species and the description applies equally well to this as to *Hexaglottis longifolia*. The type of *H. lewisiae* remains the lectotype chosen by Lewis (1959) for *H. flexuosa*.

***Hexaglottis lewisiae* Goldbl. nom. nov.**

Moraea flexuosa sensu L.f. Suppl.: 100 (1781) as to specimen cited but not to synonym; nom. illeg. (nom. superfl.).

Hexaglottis flexuosa (L.f.) Sweet, Hort. Brit. ed. 2: 498 (1830), excluding synonym *Hexaglottis longifolia* (Jacq.) Vent.; nom. illeg. (nom. superfl.); sensu Lewis in Jl S. Afr. Bot. 25: 233 (1959).

Type: *Thunb.* in Herb. Thunb. 1217 (UPS, lecto).

3. *Aristea caerulea* (Thunb.) Vahl.

Both Thunberg, who first described *Moraea caerulea* and Vahl who transferred it to *Aristea*, cited *Gladiolus capitatus* L. as a synonym. There is little doubt that *Gladiolus capitatus* was an *Aristea* but its exact identity is not known due to the absence of a type specimen and the inadequate description. Thus it is not known whether Thunberg was correct in regarding *Moraea caerulea* and *Gladiolus capitatus* as conspecific or not. In either event, *Moraea caerulea* must be rejected. The specific epithet is often spelled "coerulea", which is probably an orthographic variant of Thunberg's spelling, though the reason for this is not known to the present author. In the absence of any known legitimate synonyms (Weimarck 1940), a new name *Aristea monticola* is proposed. The type for this species remains the Thunberg specimen of *Moraea caerulea* as chosen by Weimarck.

***Aristea monticola* Goldbl. nom. nov.**

Moraea caerulea sensu Thunb., Diss. Moraea: 12 (1787) as to description and specimen but not to synonym; nom. illeg. (nom. superfl.).

Aristea caerulea (Thunb.) Vahl, Enum. 2: 124 (1805), excluding synonym *Gladiolus capitatus*; nom. illeg. (nom. superfl.); sensu Weimarck in Lunds Univ. Arssk. N. F. Avd. 2, 36: 1 (1940).

Type: *Thunb.* in Herb. Thunb. "*Moraea flexuosa* a" (cf. Wiemarck 1940) (UPS, lecto).

4. *Anapalina caffra*.

This species, long included in other species of the same genus, was first described by Baker in 1892 as *Antholyza caffra*. Baker cited Ker as the author, although Ker published the name without description and the identity of Ker's plant is not certain. Baker also cited *Anisanthus splendens* Sweet (1831) as a synonym, though this was a misidentification. Although similar, this plant actually belongs to a quite different genus. *Antholyza caffra* must be regarded as having been published in 1892, long after *Anisanthus splendens* and thus appears to be superfluous. It is, however, quite clear from Baker's description that *Anisanthus splendens* as figured and described by Sweet does not fall within the circumscription of *Antholyza caffra*. As Baker probably named his plant *A. caffra*, thinking Ker's name had priority over *Anisanthus splendens* and because the latter cannot be included in Baker's circumscription of the species the question of superfluity cannot really be raised, particularly if Stafleu's interpretation of the modification of article 63 is followed. The citation of the species should, however, read *Antholyza caffra* Ker ex Baker and *Anapalina caffra* (Ker ex Baker) Lewis.

5. A note on *Babiana plicata*, correctly *B. disticha*.

Babiana plicata Ker, the type species of the genus *Babiana*, was shown by Bullock (1961), in his review of Lewis' monograph of *Babiana*, to be illegitimate because *Gladiolus fragrans* an available synonym, was cited by Ker and is in fact the same species. As Bullock pointed out, the epithet *fragrans* is pre-occupied in *Babiana* so that *G. fragrans* cannot be transferred to this genus and the taxonomically correct name for the taxon is *Babiana disticha* Ker in Bot. Mag.: t. 606 (1803).

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